

Will Generative Artificial Intelligence Deliver on Its Promise in Health Care?

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Abstract

Importance

Since the introduction of ChatGPT in late 2022, generative artificial intelligence (genAI) has elicited enormous enthusiasm and serious concerns.

Observations

History has shown that general purpose technologies often fail to deliver their promised benefits for many years ("the productivity paradox of information technology"). Health care has several attributes that make the successful deployment of new technologies even more difficult than in other industries; these have challenged prior efforts to implement AI and electronic health records. However, genAI has unique properties that may shorten the usual lag between implementation and productivity and/or quality gains in health care. Moreover, the health care ecosystem has evolved to make it more receptive to genAI, and many health care organizations are poised to implement the complementary innovations in culture, leadership, workforce, and workflow often needed for digital innovations to flourish.

Conclusions and Relevance

The ability of genAI to rapidly improve and the capacity of organizations to implement complementary innovations that allow IT tools to reach their potential are more advanced than in the past; thus, genAI is capable of delivering meaningful improvements in health care more rapidly than was the case with previous technologies.